

Claims

1. A method (800) for improving a quality of a scalable video object plane enhancement layer transmission over an error-prone network, the enhancement layer transmission including at least one re-synchronisation marker followed by a Video Packet Header and header extensions, the method comprising the steps of:

10 replicating a reference VOPs' identifier from a video object plane header into a number of enhancement layer header extensions (715);

15 recovering (830, 840, 850, 860) from an error corrupting said reference VOPs' identifier by decoding a correct reference VOPs' identifier from subsequent enhancement layer header extensions; and

20 identifying (870, 880) correct reference video object planes to be used in a reconstruction of an enhancement layer video object plane in the scalable video transmission;

25 wherein the scalable video object plane enhancement layer transmission is an MPEG-4 scalable video object plane enhancement layer transmission, or similar, and the reference VOP's identifier is a 'ref_select_code' field (715).

2. The method for improving a quality of a scalable video object plane enhancement layer transmission over an error-prone network according to Claim 1, wherein the step of recovering includes the steps of:

30 estimating (830) a reference VOPs' identifier when an error has occurred in the reference VOPs' identifier;

decoding (840) the video object plane enhancement layer transmission until a video object plane enhancement layer header extensions is decoded; and

correcting (850) said estimated reference VOPs' identifier in response to a reference VOPs' identifier extracted from said decoded header extensions.

3. The method for improving a quality of a scalable video object plane enhancement layer transmission over an error-prone network according to Claim 1, wherein the step of recovering includes the steps of:

buffering (860) video object plane enhancement layer transmission bits, until a video object plane enhancement layer header extensions is decoded, when an error has occurred in the reference VOPs' identifier; and
correcting (870) said reference VOP's identifier in response to a reference VOPs' identifier extracted from said decoded header extensions.

20 4. The method for improving a quality of a scalable video object plane enhancement layer transmission over an error-prone network according to Claim 1, further comprising the step of:

selecting (870, 880) a correct reference VOP's identifier to decode subsequent enhancement layer transmissions.

5. A video communication system (600) comprising:
- a video encoder (615) comprising:
- 5 a processor for encoding a scalable video sequence having a plurality of enhancement layers, wherein the enhancement layer transmission includes at least one re-synchronisation marker followed by Video Packet Header and header extensions;
- 10 replicating means for replicating a reference VOP's identifier from a video object plane header into a number of enhancement layer header extensions (715); and
- 15 a transmitter for transmitting said scalable video sequence containing said one or more reference VOPs' identifier; and
- 20 a video decoder (625) comprising:
- a receiver for receiving said scalable video sequence containing said video object plane enhancement layer header extensions (715) from said video encoder;
- 25 a detector detecting one or more errors in said reference VOP's identifier in an enhancement layer of said received scalable video sequence; and
- 30 a processor operably coupled to said detector for recovering (830, 840, 850, 860) from an error corrupting said reference VOPs' identifier by decoding a correct reference VOP's identifier from subsequent enhancement layer header extensions when said one or more errors is detected, and identifying (870, 880) correct reference video object planes to be used in a reconstruction of an enhancement layer video object plane in the scalable video transmission;

wherein the scalable video object plane enhancement layer transmission is an MPEG-4 scalable video object plane enhancement layer transmission, or similar, and the reference VOPs' identifier is a 'ref_select_code' field
5 (715) .

6. A video communication unit (615, 625) adapted for use in the method of any of claims 1 to 4 or adapted for use in the communication system of claim 5.

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7. A video encoder (615) adapted for use in the method of any of claims 1 to 4 or adapted for use in the communication system of claim 5.

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8. A video decoder (625) adapted for use in the method of any of claims 1 to 4 or adapted for use in the communication system of claim 5.

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9. A mobile radio device comprising a video communication unit in accordance with claim 6 or a video encoder in accordance with claim 7 or a video decoder in accordance with claim 8.

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10. A mobile radio device according to claim 9, wherein the mobile radio device is a mobile phone, a portable or mobile PMR radio, a personal digital assistant, a lap-top computer or a wirelessly networked PC.

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